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Practical Hints on the Preservation of Health in India.

TOGETHER WITH SHORT NOTES
ON THE TREATMENT OF THE MORE COMMON
ACCIDENTS AND AILMENTS

INCIDENTAL TO
LIFE IN INDIA.

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Preface.

This small work is in no way intended to take the place of skilled medical advice when such is available.

The author, however, in the course of a lengthy experience of Indian life, has met with many instances in which illness or accident of a more or less serious nature has attacked those who, from one reason or another, happened to be out of reach of a medical man, and, as a result, much needless discomfort and suffering has been incurred.

There are also occasions known to us all when some slight ailment afflicts us which seems too trivial to justify our calling in a doctor; a sore-throat or a headache, or even "a cold" may cause great discomfort while they last, and yet we may be unwilling to trouble a medical man, even when his advice is easily procured, although we would gladly avail ourselves of a remedy.

For these reasons, this little book has been written in the hope that it may be of service not only in cases of emergency where medical aid is not at hand, but also in relieving temporary discomfort, and in warding off disease by directing attention to the rational principles of health preservation under the conditions incidental to life in India.

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Chapter I.

The General Preservation of Health in India.

"Principiis obsta, sero medicina paratur."

Among the methods for preserving health in India, sleep occupies a foremost place, and having regard to the enervating effects of the climate during a considerable portion of the year, there is no doubt that it is most important to secure sound and refreshing sleep for at least eight hours out of the twenty-four. The proper time for sleep is undoubtedly the night, and no sleep in the daytime will adequately compensate a loss of the natural sleep during the night hours. A large proportion of the illness in India, more especially among the young, may be traced to insufficient sleep, and a consequent lowering of vitality, which renders the body more liable to be attacked by disease. The temptations to curtail the proper hours of sleep are undoubtedly great to young officers and other young men in their early years of life in India. Partly from a feeling that it is not "sporting" to go to bed in good time, and partly from

a not unnatural desire to join in whatever sociable intercourse may be going on in the mess or the chummery, young fellows get into the habit of keeping late hours, when if the truth were known each one of them would much prefer to be in bed, more especially during the first months of Indian life when the effects of the climate make themselves felt by an unconquerable drowsiness, for which the natural and only effective remedy is sleep.

There is an idea widely prevalent that it is unwise to go to sleep soon after food. This notion is, generally speaking, as false as it is universal. Doubtless, if a very heavy meal, taxing the powers of normal digestion, has been indulged in, it is wiser to wait an hour, or perhaps two, before going to bed, but on the other hand if the amount of food taken has been reasonably moderate, no harm, but rather benefit, will result from yielding to the natural impulse to sleep.

The general practice in India is to rise early, whether in obedience to the call of duty as in the case of officers, or from a desire to ride or walk in the fresh morning air, and there can be no doubt that the practice is a wise one. It has already been urged that eight hours' sleep should be secured, so that if we are to be up by six in the morning we should endeavour to be in bed by ten, and to secure sound sleep it is essential to avail ourselves of the necessary adjuncts in the shape of punkahs and mosquito nets. No one can hope to sleep soundly or awake refreshed when he lies bathed in perspiration with mosquitoes feeding on him.

It is perhaps scarcely necessary to lay stress upon the importance attaching to absolute cleanliness in every particular, more especially in the care of the mouth.

Hygiene of the Mouth. If we remember that the mouth is in direct communication not only with the stomach and bowels, but also with the lungs, we shall at once recognise the importance of taking every precaution against the contamination of the cavity of the mouth. A large amount of the pain and digestive discomfort arising from defective teeth may be traced to a want of care in keeping the mouth clean. Not only this, but much of the indigestion and diarrhoea, which is so common in India is due to contamination of the stomach and bowels by organisms which either have their habitat in the mouth, or obtain access to it from the outside. The first care therefore on rising in the morning must be to brush the teeth thoroughly with a moderately hard brush, care being taken to brush the backs and the crowns of the teeth as well as their front surfaces. For this purpose water that has been boiled should be used, and the mouth should be thoroughly rinsed out two or three times during the process.

The reason for using boiled water is that, by boiling, the germs of disease which may be present in the unboiled water are destroyed, and thus a possible infection by the germs of typhoid fever or cholera is avoided. I have little doubt that if we could learn the truth, we should be able to trace many cases of typhoid fever, cholera, and dysentery to the water used for brushing the teeth. This care of the mouth should be re-

peated, even if not oftener, at least the last thing at night.

The morning bath is so universally used that it is not necessary to insist upon its utility as a means of preserving health.

Bathing.

For the large majority of men whether young or middle-aged, a cold bath is preferable to either a warm or even a tepid bath, but if warm water is used with an idea that it conduces to a higher degree of cleanliness, it should in health always be followed by a douche of cold water, one or two *gurrabs* of cold water being poured over the head and body, followed by a brisk rubdown with a Turkish towel.

Another highly important point is due attention to the function of the bowels, regularity in this respect being one of the best

Bowels.

methods of preserving health. It may be said that, as a general rule, one daily evacuation of the bowels is essential to health. The best time to secure this is immediately before the morning bath, as this habit not only tends to induce regularity, but it secures the maximum degree of cleanliness. Care should be taken during the bathing process to ensure absolute cleanliness of the outlet by which nature gets rid of the effete products, not only for æsthetic reasons, but because this attention to cleanliness is one of the most efficient means of preventing piles, and the intolerable itching which is so common in a tropical climate.

From the bath, we naturally pass to the subject of clothing.

Clothing.

Speaking generally we may say that the clothing in India should

be as light as is compatible with warmth and decency. The latter proviso is necessary for the reason that there are times in this country when one would wish to imitate Lady Godiva and be "clothed on with chastity;" but as this is not permissible under existing conditions we must perforce reduce the clothing which decency demands to the lowest limits as regards its texture. But there is one point to be insisted upon as being of paramount importance, and that is the protection of the belly from chills. Chills to the belly, with the important organs it contains are a very fruitful source of liver derangements and bowel complaints. For this reason the garments worn next to the skin should be of woollen material, however light they may be in texture. With this precaution the rest of the clothing is of minor importance and may be regulated by the taste of the wearer.

The protection of the head is essential, and one of the many forms of *topis* should invariably be worn when exposure to the sun is necessary or even probable. I have known a young fellow lose his life simply by bowling one 'over' without a hat in the month of December. If this is true of December what are the risks of June and July! The back of the neck should also be protected.

Next to clothing comes the question of diet, or the nature and amount of food to be taken by those who wish to preserve their health in India. My advice is, live wisely, but not too well. In the first place, it may be said without fear of contradiction, that most men in India eat too much. More especially is this true of the amount of meat

which is eaten. I do not advocate exclusive vegetable diet and do not wish you to think I am a "faddist" riding a tilt against a meat diet, but this I do say, both from personal experience and from what I have seen of the habits of others during nearly thirty years of Indian life, that, as a rule, men eat too much meat, thus throwing more work upon the digestive organs than they are able to perform satisfactorily, and leading to the attacks of "liver" which are so frequent a source of discomfort and disability. How often does one see a man sit down to a hearty meal at breakfast, including perhaps a couple of chops, a poached egg or two, with curried chicken or mutton to follow. Then after an interval of a few hours comes a lunch of very much the same character, with a dinner at 8 of four or five courses. In circumstances such as these one admires the elasticity of nature's digestive apparatus, and wonders that "liver" and diarrhoea are not of even more frequent occurrence.

Men between 20 and 35 or 40 in good health and fairly hard exercise undoubtedly need animal food in moderate quantities, but speaking generally I would say that meat should not be taken more than twice in the day. Some men indeed may find themselves better for only eating meat at dinner. The fact that cheese, eggs, and the "dāl" which one can so easily get in this country have a nutritive value equal to meat, while they do not produce the same putrefactive residue, is lost sight of by the majority of men, or perhaps they are ignorant of it. *Never eat tinned fish and, as a rule, avoid all tinned meats in India.* Prawns (*chingri*) are often highly

poisonous, and should be carefully avoided as articles of diet.

The diet, then, should be as varied as possible, with a preponderance of vegetable food, and a substitution of "dāl" and cheese for meat at least at one of the principal meals of the day. If fish is eaten it should be quite fresh. Never eat fish that has been allowed to get cold and then cooked up again.

Regularity of meals. Second only in importance to the nature of the diet is regularity in the succession of meals.

Many an excellent digestion, to say nothing of the temper, is ruined by irregular meals. A man who one day breakfasts at 10 and lunches at 2, and the next day breakfasts at 12 and lunches at 3, cannot possibly hope to keep either his digestion or his temper in good order. As far as possible, the most rigid punctuality should be observed with regard to the hours at which the meals are taken as the only way of preserving the functions of the stomach unimpaired.

From food we naturally pass to the question of drink.

Drink. This "drink question" is no less important in India than it is in Parliament.

I am not a total abstainer myself, nor am I sure that **Alcoholic drinks.** total abstinence from alcohol in its various forms is either necessary or desirable; but I am convinced upon one point, and that is that any alcohol which is taken should be taken with meals and at no other time. Even then it should be taken in very moderate quantities and if

in the form of spirits they should be very freely diluted. As a rule, I say emphatically that young men are far better without alcohol in any form, so long as they are in health.

I know from experience that habit and example are responsible for a great deal of the "pegging" which is prevalent in India. A false idea of good fellowship and hospitality compels many a young fellow to drink a "half-peg" when his taste and inclination would lead him to have a "plain soda" were he not afraid of seeming inhospitable or ridiculous. The habit, thoughtlessly indulged in, of having "half-pegs" or "short drinks" at odd times is undoubtedly injurious to health.

But there is another aspect of this "drink question" which is, in its way, hardly less important, and that is the economical aspect. The expenses of young officers in India are already sufficiently heavy. Their pay is barely sufficient to provide them with the necessaries of healthy life, so that it is manifestly wrong that they should feel under the necessity of spending money which they need for indispensable requirements upon liquor which is not only not necessary, but possibly harmful. The expenses attendant upon guest nights at mess with their inevitable accompaniment of champagne, and the promiscuous standing of drinks at clubs form an item in the month's expenditure which can by no means be disregarded. There has been of late years an inclination on the part of the authorities to curtail expenses of the former kind. It rests with senior officers and the younger officers themselves to discourage and discontinue the latter. It surely is a very false view

of good fellowship and hospitality which makes the dispensing of alcohol the touchstone of cordiality!

We must not leave the subject of drink here, however. After saying what we should not drink it is as well to advise what we should drink. I have premised that alcohol if taken at all should be taken sparingly and with meals, and now I pass on to the question of non-alcoholic drinks.

And of these the best undoubtedly is water. *But the water must be pure.* Impure water is the source of some of the most fatal diseases incidental to life in India, and every care must be taken to ensure that the water we drink is pure. The usual idea that water after passing through a filter is safe to drink is a dangerous fallacy, having regard to the usual nature of the filters used. It is not possible for the class of individuals for whom I am writing to provide themselves with the latest sanitary appliances in the way of filters, consequently my remarks must be taken to apply to the ordinary microbe-haunted domestic filter, and to the three-*gurrah* abomination seen in so many verandahs in Upper India.

By far the safest way to provide water for drinking purposes is to boil it, and the supply for each day must be freshly boiled. *Boil your water.* This is a safeguard which must never be omitted, as boiled water cannot be held to be safe after twenty-four hours. Still better is it if the supply of freshly-boiled water is provided twice daily. Boiled water is unpleasantly flat to the taste, owing to its having lost all its air in the process of boiling. In

order to remedy this defect all that is necessary is to make your servant half fill a glass bottle (a white glass Tivoli beer bottle is the best) with the boiled water, cork it, and shake it up for a few minutes, removing the cork from time to time. This will restore the air to the water and remove its unpleasant flatness. This may all seem irksome and absurd to the subaltern, but if he only is as particular about this as he will undoubtedly be about the polish of his boots, he will have every reason to congratulate himself, and a lazy servant will find no place in his household.

For general use there is no doubt whatever that tea is the best allround beverage. It is sanitary, inasmuch as it compels the use of boiling water in preparing it. It is restorative in fatigue, far more so than alcohol in any form, and when mixed with sugar forms an ideal drink for a day's shooting or fishing excursion. I say mixed with sugar, for it is not sufficiently recognised what a high value sugar possesses as a food for those who are undergoing exertion, whether of body or mind.

Tea, however, must be carefully prepared if it is to be either pleasant or useful. In the first place, the water must be boiling, and freshly boiling, not allowed to go on boiling till all the air is boiled out of it. Then the water must be allowed to stand in contact with the tea for three minutes exactly, no more and no less ; if a little trouble is taken in this way it will be amply repaid.

To my mind tea is best drunk with sugar and without milk. The habit of spoiling tea with milk is so strong in most people that they will, perhaps, look

askance at this piece of advice. But I repeat, tea is best without milk, both to the palate and also in view of the dangers of milk from unknown sources to the stomach and body generally.

Aërated waters, charged with carbonic acid gas, are so easily procurable at such a cheap rate in nearly all Indian stations that their use is, on the whole, to be advised in preference to plain water, always provided that they are procured from a respectable merchant who may be considered to have taken care that the water is pure before it is aërated.

Plain water aërated is preferable to alkaline aërated waters for the use of healthy people, besides being more palatable. Soda and potash and lithia-waters are all very well for the gouty, but not for healthy people.

There is one precaution to be adopted with regard to all aërated waters and that is that the supply should be laid in a week before it is required for use. The object of this is that the carbonic acid gas with which the water is charged may have sufficient time to purify the water, which it does slowly by destroying any microbes which may have been present in the water. This is a simple precaution and one easily carried out in cantonments by a little forethought. Among aërated waters are lemonade, gingerade, and tonic waters, all of which may be used as taste directs.

The question of smoking is one upon which I need not say much. Myself a moderate smoker for thirty years, I cannot say that I have ever seen any distinctly harmful effects

**Aërated
waters.**

Tobacco.

from moderate smoking. It is a question which everyone must decide for himself. Immoderate smoking, however, is undoubtedly injurious, and, upon the whole, could I live my life over again I should not acquire the habit, so strong is my impression that it has no special value, and is a simple luxury.

We must not forget, however, that there are good grounds for the opinion that the use of tobacco serves to disinfect the mouth, and it has sociable associations which are not to be despised, unless it can be shown that it is injurious to health. *Never inhale the smoke.*

The fact, however, that during training smoking is forbidden points to an expert opinion that it is incompatible with perfect physical fitness.

Coffee is valuable as a stimulant after fatigue, especially if drunk strong and without milk.

Coffee.

I am not an advocate for milk, for the reason that it lends itself so easily to contamination, and is, I believe, one of the most frequent causes of cholera and enteric fever in India.

Milk.

Milk, if used, should *invariably be boiled before use.* It is hardly necessary to urge the foolishness of drinking milk from unknown sources, such as in villages or at railway stations. This is not a "fad"; it is an earnest warning. I have personally known several cases where men have died of cholera simply from a neglect of this very ordinary precaution.

In approaching the subject of exercise, I feel a certain sense of responsibility, as I am aware that my views on this subject

Exercise.

are not completely in accord either with public opinion or the generally accepted views of the profession to which I belong. The views I shall put forward, however, are based solely upon experience, and as such I shall give them and endeavour to vindicate them so far as I am able. The golden rule with regard to exercise in India I hold to be embodied in the maxim *Ne quid nimis*.

In this, as in all other things, moderation should be the rule of conduct. It is as easy to be a glutton in exercise as it is in food, and each is, in my opinion, equally harmful. It must be remembered that the climate of India is very enervating, and makes far greater demands upon the power of recuperation from fatigue than does our own climate. There is a temptation, on first arrival in India, to pursue the habits we have acquired during our school and university life, no less in matters of bodily exercise than in other forms of energy. I would not be misunderstood. I do not advocate sloth or inertia, but I equally discourage overexertion, and what is healthy exercise in England may easily be overexertion in India. In a given time the tissue-waste during exercise in India is far greater than that attending an equal period of exercise in England, added to which the recuperative power is lessened by the climatic conditions. The inference is obvious. We must either indulge in less exercise, or we must allow ourselves a longer interval for rest and repair of waste. But we often see exactly the opposite condition of things obtaining in this country. Young fellows especially are prone to this form of intemperance in their eager

anxiety to prove themselves the strenuous, splendid-hearted boys they undoubtedly are. It is an ambition highly honourable in itself, but fraught only too often with disastrous consequences to health, and is answerable for the lives of many noble young fellows who, worn out by the greatness of their hearts, fall easy victims in these periods of overfatigue to diseases such as enteric fever and dysentery.

It is impossible to lay down hard-and-fast rules for exercise, but it may safely be said that fatigue and exhaustion should be acknowledged, and when experienced once should never be risked a second time. Each youth should recognise the limits of his physical endurance, and for mere purposes of amusement or rivalry in sports should not allow himself to overstep that limit. I have before my mind as I write, the memory of more than one gallant young fellow whose pluck and endurance in games has cost him his life by rendering him an easy prey to disease. Surely in this case "*le jeu ne vaut pas les chandelles.*"

With regard to the games themselves there is something to be said. Starting from the premiss that a soldier's life is of the highest value to the State, it is his duty to safeguard that life in every possible way. For this reason he will not despise precautions against accident in playing the various games, nor disregard the rules which have been laid down for his observance while playing polo. He will protect his head and neck against the sun while playing cricket, or while fishing or shooting. Enough has been said to show the principles to be followed.

A real and ever-present danger in connection with games is a subsequent chill. Anyone who has been an oarsman will remember

Chills.

how careful a coach is to see that every man in the boat puts his 'sweater' over his shoulders during an "easy" after a spin. This precaution against a chill, so important in our own country, is doubly necessary in India. After getting hot in any game one should immediately wrap up—the fact of being hot and perspiring may tempt a man to neglect this ordinary precaution, not realising that in India not only is a "chill" more easily got, but that its consequences are far more serious than in England. *Guard yourself carefully against chills if you have any regard for your health in India.*

I have already alluded more than once to the necessity for protecting the head against the sun, at all times, and I reiterate it here. Never go into the sun, more especially when undergoing any exertion

**Sunstroke or
"Touch of
the Sun."**

without wearing a proper *topi*. It is important that the *topi* should protect the back of the neck.

I have in my time seen more than one fatal case of heat apoplexy as the result of insane prejudice. The prejudice I speak of is the fear of exposing the body surface to cool currents of air when the tem-

**Heatstroke or
Heat Apo-
plexy.**

perature is raised by fever. It should be borne in mind that there is a vast difference between being "heated"; which is the popular term for being in a state of perspiration, and being "hot," which should mean that your body temperature is actually raised by fever.

It is undoubtedly unwise to expose the body to cool currents of air whilst perspiring freely, but in the condition when the temperature is raised perhaps to one, two, or more points above the normal, it is equally foolish to retain the bodily heat by heaping on clothes and lying in a room without a punkah. The object should be to keep the surface of the body cool as far as possible and enable the surface heat to dissipate itself, and the remedies for fever should be applied. Heatstroke most commonly occurs at night, when the air is still, and the heat is great with generally a superabundance of moisture in the air.

When there is fever, as known by the rise of bodily temperature above the normal (*see* page 19), the body should be lightly covered and a punkah kept going over it, in addition to an occasional sponging of the body surface with cold or even iced water, and application of ice to the head, and cooling drinks.

Phenacetin and Quinine (Tab. Phen. and Quinine Co.)* should be taken; two tabloids every four hours, and the bowels should be freely moved by Calomel and Jalap (Tab. Calomel and Jalap).

* See list of Tabloids given at page 46.

Chapter II.

Common Ailments.

Ague will, it is to be hoped, become far less common now that one of the frequent causes of it has been discovered. I mean the primary infection with the malarial microbe by the bite of the mosquito. As a preventive mosquito curtains should always be used at the times of year when mosquitos are prevalent. This simple precaution will do much to ward off malarial infection and should accordingly never be neglected, and the bites of mosquitoes should be avoided as far as possible by wearing boots instead of shoes, especially when sitting still in the evening hours.

Another very important precaution is the avoidance of chills. Experience shews that a chill will often determine the occurrence of an attack of ague by lowering the vitality of the blood cells, and thus allowing microbes which infect them to get the upper hand.

For the treatment of the attack, which commences by a fit of shivering followed by "fever" and sweating,

Phenacetin and Quinine* will give relief, aided by cold sponging during the hot stage before sweating sets in.

If the temperature rises very high, say to 104°, it will be wise to wrap the whole body in a sheet wrung out of cold water, aiding the reduction of temperature by rubbing the limbs covered by the sheet with lumps of ice now and again (if available) and by ice to the head.

During the intermission, quinine should be freely taken (Tab. Quinine Bisulphate gr. 5). Five grains every four or six hours should be taken. The bowels should be kept open (Tab. Lax. Veg.)

A very efficient way of taking quinine, in cases of malarial fever, is by dissolving thirty grains of quinine bisulphate in a pint of lemonade made from fresh lemons cut in slices and infused in boiling water. A wineglassful of this should be drunk every hour during the daytime.

In any case of fever, no solid food whatever should be taken till the temperature is normal.

Diet must be fluid. Never lose sight of the fact that a fever may possibly be a commencing typhoid attack, and be on the safe side, if you are away from medical advice, by adhering to an absolutely fluid diet, thus placing yourself in the best possible circumstances, should the fever prove to be typhoid in its origin. Arrowroot, sodawater and milk (carefully boiled of course), and soup must be your diet.

This may be stigmatised as alarmist advice, but I am convinced of its soundness in a country like India where

* See page 16.

typhoid is so common, and where medical advice may not be available for two or three days or perhaps more.

One of the commonest ills that flesh is heir to in

Headache. India is headache, and while it may mean nothing more than some error

in diet overnight, or loaded bowels, it may be the danger signal announcing the onset of some more serious disease. For this reason I would advise every young fellow who suffers from a headache for more than a few hours to consult a medical man and get his advice without delay.

But supposing he is so situated that he cannot avail himself of medical aid, he may be

Temperature. forced to try and relieve himself. Let him first take his temperature. Every person should know how to take their own temperature, and a clinical thermometer is so easily carried that there is no difficulty in this. All that is required is to see that the mercurial index is at or below the mark 98·4° of the scale. This may be done by holding the thermometer between the finger and thumb of the right hand with the mercury bulb pointing to the floor. Then raise the hand above the head and bring it down sharply towards the floor. By repeating this manœuvre once or twice the column of mercury will fall to the desired level. To take the temperature the bulb of the thermometer is then placed under the tongue, and the lips (not the teeth) closed on the stem. The thermometer is to be left in this position for two or three minutes and then taken out and inspected. If the temperature is above the normal (98·4°) the column of mercury

will indicate the point to which it has risen as shewn on the graduated scale. If the temperature is not elevated, it may fairly be assumed that the headache is of no very serious import, and will probably pass off. Attention to diet, and an aperient if the bowels are constipated (Tab. Lax. Veg.) with a tabloid or two of Phenacetin (Tab. Phenacetin), or Phenacetin and Caffein (Tab. Phenac. Comp.), will probably be all that is required.

If the headache is attributable to exposure to the sun, or is attended with a feeling of fullness, and perhaps flushing of the face, cold affusion to the head, and a mustard plaster to the nape of the neck, with a purgative if required (Tab. Lax. Veg.), a darkened room and avoidance of stimulants will probably give relief. Bromide of potash is also useful. (Tab. Pot. Brom.)

If the temperature is elevated, Phenacetin and Quinine (Tab. Phenacetin and Quinine Co.) should be taken every four hours for three doses, and great care should be exercised in avoiding fresh exposure to the sun for a day or two.

The headache resulting from over-indulgence in food and drink will yield to purgatives (Tab. Cal. and Jalap) with rest in a quiet darkened room, cold to the head, and restricted diet. A dose or two of Bromide of Potash (Tab. Pot. Brom.) will also help to procure relief.

Neuralgic pains may affect any part of the body.

Neuralgia. The most common situation is the eyebrow, and here it is popularly known as *brow-ague*.

For its relief menthol (Menthol Cryst.) applied over

the seat of pain is useful, and Phenacetin (Tab. Phen. and Quin. Co.) will often be of service. The bowels should be kept open (Tab. Lax. Veg.)

When it attacks the large nerve of the leg it is known as *Sciatica*. This may arise from exposure to wet and cold (as, for instance, in wading above the fork when fishing). For its relief, the local application of heat by cloths wrung out of hot water (as hot as can be borne) and applied to the flat or hollow of the buttock immediately behind the head of the thighbone is useful, aided by Salicylate of Soda (Tab. Sod. Salicyl.) ten grains every six hours, and a dose of Dover's powder (Tab. Dov. Powd.) at night when going to bed.

When any looseness of the bowels occurs in India, it should be attended to at once; never on any account allow it to run on under the mistaken idea that it is salutary. Diarrhoea is an unnatural condition, and indicates some disturbance of the normal functions of the bowels. The cause of this disturbance must be sought for and removed.

The commonest cause of looseness of the bowels is some local irritation, usually something that has been taken in as food, e.g., tinned salmon or lobster, or in connection with the cooking, as in the diarrhoea arising from badly-tinned degchies.

"Prawns" are a very fertile source of choleraic attacks and should never be eaten. Diarrhoea may also be due to chill, or again to the presence of some microbe in the food or water we have taken.

It may be painless, or attended by more or less

severe pain. If painless and watery, it is often choleraic in origin, and demands immediate attention.

First of all, the diet should be carefully regulated.

Treatment. Milk arrowroot (*see Foods*) is quite the best food, but sago or tapioca may be taken if preferred. Solid food should on no account be taken while diarrhoea continues. For a drink, soda-water and milk (the milk should first be boiled) is as good as anything. Tea may be taken, but not coffee.

If we can trace the diarrhoea to any food (such as tinned meats or game, etc.,) a dose or two of the Castor oil mixture (*see Drugs*) will be the best medicine to take. Rest in bed is desirable during the attack. When the irritating substances have thus been got rid of, a few drops (10 to 30 drops) of Chlorodyne (*see Drugs*) in a wineglassful of hot brandy and water will complete the cure, but care must be observed for two or three days. A few doses of Bismuth and Soda, (Tab. Bismuth and Soda) may be taken for a day or two till the bowels are normal again.

Diarrhoea from Chill. In this form of diarrhoea, rest in bed, with warmth to the belly, milk diet as in the former case, and the use of Bismuth internally (Tab. Bismuth and Soda) will generally effect a cure.

Choleraic Diarrhoea. In this form, water-arrowroot (*see Foods*) with or without brandy, a teaspoonful to the breakfastcupful of arrowroot, should alone be taken as food, and the diarrhoea should be controlled, if possible, by Chlorodyne or (Tab.

Lead and Opium). Absolute rest in bed is essential, and the body should be kept warm.

If cramp should come on in the calves, they should be rubbed with dry mustard, or hot fomentations may be applied.

If there is nausea or vomiting, ice may be sucked if it can be procured: a mustard poultice to the pit of the stomach may also give relief. (*See Mustard Poultice*).

N.B.—*Medical help should be procured, if possible, even if from a considerable distance.*

This term is here used in two senses; that is to say, to denote the ailment which is popularly known as “Dysentery” as well as true or tropical Dysentery.

Dysentery. The former is the more common and is of comparatively slight importance, yielding readily to treatment.

Causes. It nearly always is the result of a chill to the bowels.

The symptoms of this are more or less pain in the belly, and discomfort in passing the motions, which consist wholly or in part of slime mixed or streaked with blood.

The diet must be restricted to water-arrowroot (*see Foods*) *without* brandy. Rest in bed is essential, with warm cloths to the belly, and the Bismuth and Castor oil mixture (*see Mixture Bismuth Castor oil*) every four hours. Relief will generally be obtained in from twenty-four to forty-eight hours.

Care must be taken for some days after the attack

has passed off and the motions have become natural, to keep the belly warm, and return gradually to ordinary diet.

True or tropical dysentery is due to a germ, aided by exposure to lowering influences, such as fatigue or cold. The germ is generally introduced in drinking water.

True Dysentery.

Cause.

The onset of the disease is attended with pain in the belly and diarrhoea, the motions are slimy and bloody, attended with burning and straining and frequent desire to pass water. The temperature may or may not be elevated above the normal.

Symptoms.

The food should consist entirely of thin milk arrowroot (*see* Foods) and soda-water with boiled milk may be taken as a drink.

Treatment.

Absolute rest in bed is essential, and warmth to the body must be secured by sufficient coverings.

The belly should be kept warm with hot cloths (flannel, if possible) and bottles filled with hot water kept to the feet. Stimulants should not be taken.

To relieve the straining a small enema consisting of twenty drops of Laudanum (Tab. Opium. Tinct.) with two tablespoonfuls of cold water arrowroot should be carefully injected with a syringe and may be repeated after half-an-hour *if the first injection is not retained*. If not rejected repeat after six hours.

At the same time five drops of Laudanum (Tab. Opium Tincture) should be taken by the mouth, and after half-an-hour, a single dose of 30 grains of Ipecacuanha (Tab. Ipecac. Powder) should be made into a pill with a very little water arrowroot (just sufficient

to bind the powder into a ball no more) and swallowed. Immediately after taking this pill the patient must lie down flat on his back, and resist the inclination to vomit. Should he vomit within fifteen minutes or so, the dose must be repeated. Should he not vomit, the dose need not be repeated for eight hours, when 15 grains of Ipecacuanha must be given, made into a ball as above directed. The tabloid must first be powdered.

These measures will in most cases result in speedy cessation of the pain and straining and the motions will gradually resume their natural character. GET MEDICAL AID IF POSSIBLE.

Great care must be taken for some time to prevent a relapse, and a flannel belt should be worn round the belly day and night.

N.B.—The sweeper should be ordered to *burn* all the motions, or failing this, to bury them in a deep trench far from any well or other source of water-supply. To burn them they should be mixed with *Shūsa* soaked with Kerosine oil.

This is not one of the ailments which is likely to attack young officers, under ordinary conditions. As a result of some indiscretion in either the nature or amount of the food taken, or perhaps in consequence of a long period of fasting followed by a meal which would at other times not be excessive, a feeling of pain or discomfort may be experienced, attended with "heart burn" and other uncomfortable feelings.

In such cases, the symptoms will generally pass off after a few hours, if the stomach is not irritated by the

introduction of further food, and the judicious omission of a meal will often set matters right.

If, however, the discomfort experienced is at all acute, a wineglassful of water as hot as can be comfortably swallowed, in which has been dissolved a little menthol (Tab. Menthol Co.) will give great relief. This should be followed by an occasional tabloid of Soda-mint (Tab. Soda-mint), and a teacupful of hot water should be drunk every hour or so till the feeling of discomfort is relieved. If the bowels are constipated, this condition should be removed by recourse to a simple aperient such as Cascara (Tab. Cascara Co.)

As a preventive of indigestion in those who are pre-
Papeeta Fruit. disposed to it great advantage will be derived from the systematic use of the fruit known as "Papeeta" or "Papaya," when this is in season. This fruit is common in all Indian bazaars, and is found extremely palatable by some persons, though others seem to find it insipid to the taste. The taste of different specimens of this fruit varies considerably, but the digestive properties are the same in all, whether delicious to the taste or not. Here it may be remarked with regard to fruit in general, that care should be taken not to eat overripe or unsound fruit, though fruit as an article of diet should be freely taken. The banana or plantain, called in the vernacular "Kela" is especially nutritious and valuable as a food, though in some people it may give rise to a little temporary acidity.

In those lesser cases of dyspepsia in which there is
Acidity. no pain nor even discomfort, but what is known as "acidity," a tabloid of

Bicarbonate of Potash (Tab. Potass. Bicarb.) dissolved in a wineglassful of hot water and swallowed will generally afford immediate relief, or Tab. Magnes. Carb. Co. may be used instead.

There are few ailments more annoying than a common "cold" and although as a rule they tend to get well in two or three days, we may do a certain amount to speed the parting guest whose coming none of us are inclined to welcome.

Following upon a chill of some kind, perhaps a wetting, or sitting under a punkah or in a draught while heated and perspiring, the first indication that we have "caught cold" will usually be a fit of sneezing, with more or less irritation of the nose and soft palate amounting perhaps to actual soreness.

If these early symptoms are not disregarded we may very often cut short the "cold" at this stage. To do this the best thing is to gargle the throat with hot alum and water frequently. (Soloid Alum gr. 10), and wash out the nostrils by sniffing up a tepid solution of common salt, a small saltspoonful of table salt in a small tumbler of tepid water, or (Soloid Nasal. Alk. Co.) may be used with advantage. The tumbler should be full, and the nostrils inserted into the water and the solution of salt be sniffed up through them. It will pass backwards into the mouth and should be spat out, and the process repeated three or four times. This will be found to give great relief to the uncomfortable feeling in the nose and palate. The salt is necessary, as if

plain water be used it will cause pain and irritation. With this local treatment it will be found useful to take small doses of Ipecacuanha wine (five drops) (Tab. Ipecac. Wine) with Salvolatile (twenty drops), in a wineglassful of water every three or four hours.

At night the feet should be put in hot water for ten or fifteen minutes, and a dose of Dover's powder (Tab. Dov. Powd.) taken, followed by a little hot whisky and water (with sugar and lemon to taste!) after or just before getting into bed. If these directions are followed many a cold will be nipped in the bud, and days of discomfort saved. A little Vaseline rubbed over the outside of the nose and inside the nostrils, will be found to give great relief to the feeling of "stiffness" in the nose. This treatment should be persevered in while the "cold" lasts.

The simplest and best treatment for an ordinary Sorethroat "sorethroat" is the use of a wet compress to the throat. This is easily carried out by folding an ordinary cambric handkerchief till it is about twice the size of an ordinary cigarette-case—say about six inches by two, wringing it out of either hot or cold water till it is nearly dry (it must not be so wet as to drip), and laying it on the front of the throat, covering it either with a piece of flannel or with a second handkerchief folded corner wise, and again folded till it is slightly broader than the wet compress. This handkerchief may then be knotted so as to keep the compress in position. It should be left on all night.

A hot alum gargle (Soloid Alum) will also give great relief to the throat.

Coughs are somewhat difficult to deal with in a book of this kind, as they result from such a variety of causes. It may be said, however, generally, that a cough following on, or attending a "cold" may be got rid of by the remedies recommended for a "cold." Salvolatile and Ipecacuanha wine, with Dover's powder at night, will generally get rid of such coughs. If a cough persists, early opportunity should be taken to consult a medical man.

Occasionally small very painful ulcers form on the inner surface of the lips or tongue. **Ulcers of the lips and tongue.** The best treatment for these is to touch them lightly with a pointed pencil of caustic (Silver nitrate). This will relieve the pain rapidly, and they will usually heal without further trouble. Or failing caustic, they may be wiped dry with the corner of a pocket handkerchief and covered with a little powdered alum frequently.

The occurrence of such ulcers usually shews a more or less low state of health, and Quinine (Tab. Quinine bisulph.) should be taken in doses of two or three grains twice or three times daily.

The use of neutral tinted "glareglasses" is often a great comfort and will help to prevent sore eyes.

The eyes may become inflamed and sore, and call for treatment. The pain at first will hardly amount to more than slight itching, and will be attended with a little redness of the eyes, and perhaps also of the eyelids.

No time should be lost in attending to such a condition

however trivial it may appear. This is of the highest importance.

For its relief perfect cleanliness is the first requirement, and the eyes should be frequently bathed with a lotion of Boric acid (Soloid Boric Acid), or with a solution of Alum in tepid water (Soloid Alum).

Exposure to light should be avoided as far as possible. If these directions are followed relief will generally be very soon obtained.

If, however, the inflammation should increase and discharge appear, this should be most carefully washed away with the Boric or other lotion, the greatest care being exercised not to infect the other eye if one only is affected, as the matter from the sore eye is highly infective. For cleansing the eye pledgets of soft absorbent Boracic cotton thoroughly wetted with the lotion are best, and *these should be burned after being used.*

If the inflammation is very severe with great swelling of the lids, and throbbing pain, a leech (or perhaps two) should be applied to the temple and allowed to draw blood. Leeches are called in Hindustáni *jonk* (like joke with a nasal n before the k), and any sweeper will generally be able to procure them. The best place to apply the leech is just above the centre of a line joining the outer angle of the eye with the orifice of the ear. To make the leech adhere, the skin should be moistened with a drop of milk at the point where it is desired to apply the leech. It will soon begin to draw and may be allowed to remain till it

drops off. *Never attempt to pull off a leech by force.* If it should not drop off of itself, and it is desired to remove it, a few grains of common salt sprinkled on its body will cause it to drop off. The bleeding point from which the leech has dropped off should then be wiped clean with a pledget of boracic cotton, and a small pad of similar cotton be pressed firmly on the bleeding point against the bone underneath till the bleeding ceases. This small pad may be left in position. The other treatment must be persevered in, thorough cleanliness and the use of the boracic lotion. If pain is so severe as to prevent sleep, Opium (Tab. Opium gr. $\frac{1}{2}$) should be given at night, and Cocaine may be dropped into the eyes (Soloid Cocaine and Eucaïne.) The bowels should be kept freely open (Tab. Magnes Sulph. Co.) The food taken should be light and nourishing. No stimulants should be taken, and it is hardly necessary to say that the room should be kept dark. In the intervals of washing, a square of lint soaked in boric lotion should be laid over the eyelids, but *the eyes must not be bandaged.* Crushed ice may be applied to the closed lids from time to time if the inflammation is severe, and will often give great relief.

N.B.—IN SEVERE OPHTHALMIA OF THIS KIND MEDICAL AID SHOULD BE OBTAINED IF IT IS AT ALL POSSIBLE EVEN FROM A DISTANCE, AS THE LOSS OF THE EYE MAY EVEN OCCUR IN SUCH CASES.

Earache is occasionally troublesome, as the result of chill, or from the use of an earpick in a mistaken idea of cleanliness. The wax which ordinarily occupies the cavity of the ear is

one of nature's protective provisions, and should never be removed either by syringing or otherwise, except under medical advice. Simple earache may often be relieved by rubbing the bony prominence behind the ear, and the groove between this prominence and the jaw-bone, with a few crystals of menthol on the finger. A pledget of cotton should be kept in the ear. If the pain is attended with discharge from the ear *medical advice should be obtained as soon as possible.*

This calls for the help of a dentist. To relieve immediate pain, if the aching tooth is hollow, filling it with a paste made of bicarbonate of Soda and Laudanum will often give relief, or Bunter's Nervine may be used. Stuffing the hollow cavity with a small plug of tobacco soaked in whisky sometimes gives relief. A small crystal of menthol may be inserted into the cavity of the tooth. All these, however, are merely palliative remedies.

This is a most annoying irritation of the skin attended with a more or less profuse red rash, **Prickly Heat.** but is of no consequence beyond the discomfort caused by the intense itching.

It is most common in new arrivals in India.

As a preventive, the avoidance, as far as may be possible, of excessive perspiration by the use of light clothing is to be recommended, and cold bathing as a habit. To relieve the intolerable itching, the skin may be dusted with Fuller's earth after careful drying, but the plan the writer has always found most effective is to sponge the skin rapidly with water as hot as can be borne.

The dusting powders advertised for prickly heat are

in the writer's opinion useless, Fuller's earth being better than any of them.

To relieve the smarting of severe sunburn nothing is better than Vaseline gently rubbed into the skin.

Sunburn.

This is generally the result either of a chill, or of some improper food or both combined, and may be avoided by care, and when it occurs, relieved by warmth to the belly aided by a mild aperient—(Tab. Cascara Co.) When severe and colicky pains occur, with some degree

Stomachache.

of distension of the belly, it will often be found that a little hot brandy or whisky and water, or a little hot water with menthol, aided by gentle massage of the belly with the hips raised on pillows higher than the head will give speedy relief. Internally camphor and belladonna (Tab. Camph. and Belladonna) will be found very useful, one tabloid every four hours for four doses.

Colic.

In applying massage in such cases no force should be used, and the friction should be made with the flat of the hand commencing from the right loin, carrying the hand upwards as far as the ribs then across the belly to the left side below the ribs and then downwards to the left loin, *never in the contrary direction.*

If pain is felt in the lower part of the belly, on the right side, a gentle aperient should be taken (Tab. Veg. Lax.) and fluid diet only taken till the pain is quite gone. A few doses of Salicylate of Soda (Tab. Sod. Salicylate) ten grains every four or six hours will assist in giving relief in such cases, aided by warmth.

In all cases of pain in the belly a fluid diet should be taken till all pain is gone, and care should be taken to keep the bowels regular, avoiding constipation.

Constipation is often very troublesome in India. It consists in an undue retention of the contents of the bowels, which in most people are got rid of every day when they are in their usual health. This daily evacuation of the bowels is with most people a necessary condition of comfort and well being.

The most frequent cause of constipation in India is the too sparing use of water, and it may be relieved in many cases simply by drinking a greater quantity of fluid. A glass of hot water the last thing at night is useful. Another frequent cause is neglect of regularity in emptying the bowels, disregarding the call of nature either from indolence or carelessness, because it comes possibly at an inconvenient moment.

Few people suffer from constipation who have a regular habit of attempting to empty the bowel at a given time, the most convenient being as has been pointed out, the early morning before the bath.

It is not within the scope of this book to go into all the causes of constipation, and if the principles which have been advocated for the care of the general health be attended to, constipation will rarely be complained of. The use of a good mixed diet containing a reasonably large proportion of fruit and vegetables, and a due proportion of fat in the shape of butter, or oil, which may be taken with salads, together with a fairly ener-

getic habit of life will generally ensure a healthy condition of life as regards the daily evacuation of the bowels.

For an occasional aperient there is in my opinion nothing better than Cascara. (Tab. Cascara Co., or Tab. Cascara and Gentian Co.)



Chapter III.

Injuries and Wounds.

Sprains are of common occurrence, and are best treated by *Rest*, fixation of the sprained

Sprains. joint by a bandage, alternate douches of hot and cold water frequently, and embrocation. (*See Drugs, Liniments*).

In the case of severe bruising, such as may result from a fall while fishing or shooting, if there is any swelling with a feeling of elasticity, complete rest should be taken, and some soothing liniment applied (*see Drugs, Lin. Saponis cum Opio.*) Cold water applications will be of service.

If any so severe injury as this should unfortunately occur while at a distance from medical aid the only thing to be done is to attempt to replace the broken bone as nearly as possible in position judged by comparison with the sound limb, and retain it in position by some hastily extemporised splint; such as split bamboo roughly padded and bandaged on to the limb, till medical aid can be summoned—which should be done without loss of time. Any bandages which may be applied must be firmly applied: but never

so tight as to obstruct circulation, and if the end of the broken bone has pierced the skin, the wound should as soon as possible be carefully cleansed with *boiled water* or better still with carbolic lotion (Soloid Carbol. Acid), or Mercurial lotion (Sol. Corrosive Sublimate (1 in 1000); and the wound then sealed with a pledget of Boracic Cotton steeped in Friar's Balsam (*see* Drugs). Absolute rest should be maintained in such a case, pending the arrival of medical aid.

If the fall has injured the chest, and a broken rib is even suspected, the movements of the chest should be restrained as far as possible by a long broad bandage four inches wide fixed firmly round the chest, and on no account should a deep breath be taken. The sufferer should lie flat on his back in bed.

Pain and restlessness may be relieved by opium (Tab. Opium).

These will almost invariably necessitate medical aid, but in the case of a dislocated shoulder it may perhaps be replaced if you happen to have a companion handy who can help you within a short time of the accident. The way to attempt to reduce a dislocation of the shoulder joint is by placing the sufferer on his back, and *removing your boot*, place your heel in his armpit, as you sit on the ground beside him on the same side as the injury. Then with your heel make pressure towards his shoulder joint at the same time that holding his hand and arm with both hands you make *steady* traction on the arm. If you are fortunate enough to succeed,

the head of the bone will slip into its socket with a distinct snap. When this is felt, the extension of the arm should be discontinued.

Another plan is, with the sufferer seated in a chair, to raise the dislocated arm till it is at right angles with the body, and then placing the knee in the armpit, use it as a fulcrum, levering the upper end into position, if possible, by depressing the lower end, grasping it just above the elbow joint. *Avoid using excessive force.*

By one or other of these manœuvres a dislocation of the shoulder joint may usually be reduced, if it is resorted to without delay. If fortunately restored to its position, the arm should be supported in a sling, reaching from the elbow to the hand, and a bandage passed round the body over the injured arm to confine it to the side.

This may result from an injury to the head, the result of a fall, or other blow on the head. Its symptoms are unconsciousness, with a slow pulse and more or less laboured breathing. The body surface as a rule will be cold.

These symptoms may last for a shorter or longer time according as the concussion is less or more severe. With a return to consciousness, the body will become warmer and sometimes vomiting will occur. This is often a sign of commencing reaction.

In all cases of concussion of the brain, however slight, perfect quiet should be secured

Treatment.

with rest in bed

Stimulants should never on any account be given.

If the body is very cold, bottles filled with hot water, or hot bricks wrapped in a jersey, may be applied to the feet, and sides of the body. As reaction sets in, cold water or (if available) ice should be applied to the head. The bowels should be relieved by a calomel purge (Tab. Cathart. Co.) and nothing but fluid diet allowed. Rest and care for several days are essential.

Wounds.

Every wound, no matter how slight and trivial it may appear, should be scrupulously cleansed *at once*, and if it contains earth or grit of any kind, this should be carefully removed by frequent washing (with *boiled* water if possible) and some antiseptic lotion (Soloid Carb. Acid.) or (Soloid Corrosiv Subl.) An antiseptic dressing should then be applied, and renewed as frequently as may be necessary till the wound is healed.

The edges of a wound should, after careful cleansing, be brought together as closely as possible and kept approximated by strapping, over which should be placed antiseptic dressings kept in place by a firm bandage.

Bites of Animals.

If you are unlucky enough to be bitten by a venomous snake the best thing you can do is to tie a tight ligature round the limb a short distance above the bite, and then without

Snakebite.

losing a moment destroy the bitten part by heating a knife or other iron implement to red heat and cauterising the part thoroughly with it before you loose the ligature; or you may rub Permanganate of Potash into the wound, but cauterising it is safer. (See Permanganate of Potash.) (Soloid Potass. Permang.)

If bitten by a dog or other animal (horse, or jackal), **Rabid animals.** which you have any reason to think may be rabid, destroy the bitten part instantly if possible as above directed, or a probe may be armed with cotton wool rolled round the end of it and each tooth wound thoroughly cleaned with this dipped in strong Mercurial lotion 1 in 500. (Soloid Corrosiv Sublimat); the depth of each wound being thoroughly explored with this armed probe.* The wounds should subsequently be kept dressed with a weaker mercurial lotion 1 in 2000 (Soloid Corros. Subl.)

Hæmorrhage or Bleeding.

N.B.—GET SURGICAL AID AS SOON AS POSSIBLE.

A divided artery may be known by the blood leaping from the wound in jets, and the blood is bright scarlet.

Such bleeding should be controlled as soon as possible.

For this purpose direct pressure at the wound (if possible against some bony part) will control the hæmorrhage for the moment. This pressure may be exercised by the fingers at first, followed by a series of firm pads of anti-

* Pure Carbolic acid is recommended for this purpose by the Director of the Pasteur Institute, Kasauli.

septic lint, the first of which is slightly larger than the top joint of the thumb, the next slightly larger, and so on till three or four are applied one above the other. These pads are then to be kept in position by firm bandaging and the limb elevated and kept at rest.

Graduated pads. As arteries convey blood from the heart to the extremities it follows that to restrain bleeding from a wounded artery pressure must be kept up between the heart and the wound. In the case of a wounded artery in the foot or leg, pressure should be kept up on the femoral artery in the groin. In the case of a wounded artery in the hand or arm, pressure should be kept up on the brachial artery, which will be found on the inner side of the biceps muscle (a muscle everyone knows), where it may be pressed against the bone.

As compression with the fingers cannot be kept up for long, a simple tourniquet may be improvised by rolling up an oval flat-tish pebble, (or failing anything else the ball from the neck of a sodawater bottle) in a handkerchief, and tying this round the limb with the hard substance over the artery (as felt pulsating). The ends may then be twisted by means of a stick inserted through their loop and firm pressure be kept up, restraining hæmorrhage till surgical aid arrives.

Bleeding from a wound in the palm may be controlled by applying graduated pads over the bleeding point as above described, and then making the patient grasp a

Wounds of the palm.

ball of some kind (this may be made by rolling a few turns of bandage round and round into a ball over a round stone, or the ball at the butt of a fishing rod wrapped in lint will answer well), and then binding the flexed fingers firmly over this ball with a bandage. The arm should be kept raised in a vertical position.

From wounded veins the blood flows steadily, not in jets. It is dark in colour, and pressure on the side nearest the heart only increases it as the current of blood in the veins is *towards* the heart. Pressure must there-

Wounds of veins.
Pressure.
 fore be applied on the side of the wound furthest from the heart to control bleeding from veins. Local pressure should be kept up by firm antiseptic pads as described in the case of wounded arteries. The limb should be elevated.

Drowning. Suspended Animation.

It may be your lot when fishing to be present when a fellow-sportsman loses his footing, and is apparently drowned when brought to land.

No time should be lost in attempting to restore animation. The best method is that introduced by Dr. Silvester.

Wipe the mouth and nostrils and see they are clear ;
Artificial respiration by Silvester's Method.
 then lay the body on its back on a slightly sloping surface if possible, with the head slightly higher than the feet, placing a flat-folded coat under the shoulders, *with the head slightly turned to one side and kept in a line with the trunk.* Make a clove hitch with

a piece of fishing line round the tongue and draw it forward so that it projects from the lower side of the mouth. Then kneel at the patient's head and seize the arms just above the elbows and draw them towards you, throwing your body back as you do so, till the arms nearly meet above the head, then count five, and then lower them by pushing them downwards and away from you till they rest against the ribs, making firm pressure with them against the walls of the chest, throwing the weight of your body into the movement.

Repeat the process, throwing your body backwards as before, and again bringing the arms down about fifteen times a minute, and *persevere for at least an hour*. If your efforts are successful, natural breathing will recommence and gradually increase in frequency and power, till fully restored.

The limbs should, if possible, be rubbed from below upwards during the whole of this period. In India there may be a warm sandbank where this can be all carried out, the sand being utilised for restoring warmth by heaping it over the lower limbs. As soon as the power of swallowing returns, give him a little warm milk, or warm water with a little whisky or brandy, and when breathing is fully restored get him to bed as soon as possible with hot bottles to the feet, and let him sleep.

But be careful to watch the breathing, and if any signs of its cessation occur, *at once* have recourse to the artificial respiration again, and if he can swallow give a little Sal Volatile in warm water well diluted (30 drops in a wineglassful of water).

Chapter IV.

Equipment of Drugs, etc.

The pocket or saddle-cases supplied by Messrs. Burroughs, Wellcome and Co. have been proved by experience to be the most suitable and convenient form of equipment, as in this way a stock of medicines sufficient to meet any ordinary emergency may be carried in a very small compass.

For example their "No 125" Tabloid brand Medicine pocket-case only measures $5\frac{1}{2} \times 4 \times 1\frac{1}{2}$ inches and yet contains an assortment of drugs sufficient to meet any emergency likely to arise.

It is recommended that for the tropics any such pocket-cases should be bound in cowhide.

On the whole I would recommend a larger case than the above as it is desirable to have a small supply of surgical dressings in addition to the stock of drugs.

This case should contain the following :—

INSTRUMENTS :—

A small case
containing

{ A self-registering Clinical
Thermometer in plated bay-
onet catch case.
A pair of Scissors.
A pair of Dressing forceps.

INSTRUMENTS:—

A small case
containing

{ An eyed probe.
Safety pins.
Pencil of Caustic (silver
nitrate).

DRESSINGS:—Bandages, Antiseptic cotton, Antiseptic Gauze, Adhesive plaister, Tape plaister, Lint, Vaseline.

A small mortar and pestle. A two ounce glass 34 ringe.

ANTIVENOM SERUM AND SYRINGE:—The addition of these to the equipment is highly advisable inasmuch as snakebite gives little respite to the sufferer, and immediate treatment is essential.

DRUGS:—

Menthol Crystals.

Vaseline.

Friar's Balsam.

Sal Volatile.

Chlorodyne.

Pure Carbolic Acid.

} In stoppered bottles.

SOLOIDS:—

Compressed drugs for preparing *lotions*, etc.

Soloid of Alum gr. 10; one dissolved in half a teacupful of water as a gargle.

„ Boric Acid gr. 15; one dissolved in two table-
spoonfuls of water for a lotion.

„ Carbolic Acid gr.
20; one dissolved in three table-
spoonfuls of water for a lotion.

„ Cocaine & Eucaine; one dissolved in two teaspoo-
nfuls of water for an eye lotion
to relieve pain.

„ Corrosive Subli-
mate; (gr. 8.75) { one dissolved in a pint of water
=1 in 1,000 solution.
one dissolved in half a pint of
water=1 in 500 solution.

- Soloid Nasal. Alk. Co. one dissolved in half a pint of tepid water.
- „ Potass perman-
ganate (gr. 5); one dissolved in half a pint of water.

TABLOIDS :—

Compressed drugs for internal medication.

<i>Dosage and use.</i>	<i>Page refer- ence.</i>
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N.B.—With regard to these tabloids the usual single dose has been given. In the case of the laxatives and purgatives each person will soon find by experience the dose best suited to himself. In the case of other tabloids, of those marked with an asterisk (*) the dose should not be repeated oftener than every four hours, and those marked with a double asterisk (**) should be repeated more cautiously at much longer intervals, of eight or twelve hours. REMEMBER ALWAYS TO AVAIL YOURSELF OF MEDICAL ADVICE IF YOU CAN OBTAIN IT.

CASTOR OIL:—*Dose:* A tablespoonful on half a wineglassful of warm milk. This is procurable in any bazaar under the name *Rendee ká tel* or *Reree ká tel*.

BISMUTH AND CASTOR OIL MIXTURE FOR SPURIOUS DYSENTERY:—To prepare this you must rub down two (5 gr.) tabloids of Bismuth Carbonate in the mortar with one Tabloid Menthol Comp. one Tabloid Soda bicarb. and one Tabloid Ipecacuanha wine. When they are reduced to a fine powder in this way, add gradually a dessertspoonful of Castor Oil and rub the mixture into a cream adding sufficient water to make it thin enough to drink, or swallowing it as it is from a spoon.

It is not palatable, but will be found to cure you quicker than anything else. It should be repeated every four hours.

LINIMENTS.

Elliman's Embrocation is a very useful application in the case of muscular pains, or sprains to joints.

Liniment Saponis c Opio. (Soap and Opium liniment) is a very useful liniment for use when there is pain and bruising.

The effects of liniments are much increased by first bathing the affected part in water as hot as can be borne without discomfort, and then gently rubbing in the liniment and covering the part with cotton wadding.

MUSTARD POULTICE.

How to make it.—Take equal parts of dry mustard and flour, mix them together in a plate with a spoon and gradually add water, rubbing the mixed flour and mustard into a thin paste. Then smear this over the surface of a square piece of brown paper leaving a margin of an inch all round. Finally turn over the margins on to the edges of the mustard paste and apply to the part, covering it with a folded handkerchief, and fixing it if necessary with a bandage.

To apply it.—The poultice should be left on for from fifteen to twenty minutes. After removal any adherent mustard should be lightly wiped off the skin with a pledget of cotton, and the part dusted with Fuller's Earth.

Foods for use in Sickness.

Milk.—The greatest care should be exercised with regard both to the source and the storage of milk. All milk should be boiled before use as this precaution minimises the danger of infection with cholera and enteric fever which are so often conveyed by milk in India.

Milk and Sodawater.—Equal parts of milk and sodawater should be mixed, and used as a drink in cases where solid food is not admissible.

Beeftea.—A pound of lean beef should be cut into small pieces and placed in a "boyām" with a pint of cold water, and a little salt, the top of the "boyām" being fastened down firmly. It should then be placed in a "degchi" of water over the fire and allowed to simmer gently for two hours.

Chicken broth—May be made in the same way as beeftea, using chicken in place of the beef.

"Bovril" or "Lemco" is convenient for Camp use, a teaspoonful of either in a breakfast cup full of hot water will make a good cup of beeftea.

Brand's Essences.—In cases of emergency, as in prostration from fever or loss of blood, Brand's Essence of Beef or Chicken is very valuable, a small teaspoonful may be given occasionally. The tin should be kept standing on crushed ice and salt, if possible, and covered with an inverted tumbler, when opened, to prevent access of flies.

Egg flip.—Beat up two eggs with a fork or whisk (adding a small pinch of salt before commencing to beat the eggs up). Add to this a tumbler full of milk, warm or cold as preferred, and a little sugar. Finally stir in a dessertspoonful of brandy. This is a very useful food where a stimulant is required and will often be found agreeable after a heavy day's work in the open, if exhaustion is complained of.

Lemon flip.—To the expressed juice of two small lemons (Kāghazī nimbū) add half a pint of water in which a little sugar has been dissolved. Then add the *white* of two eggs beaten up and beat to a froth. This is a nutritious and very refreshing drink, especially when iced.

Oatmeal Porridge.—To each pint of water you will require four ounces of oatmeal.

Dissolve a saltspoonful of salt in the water and let it come to the boil. Rub the oatmeal smooth in a little cold water and add it gradually to the boiling water stirring it all the time. Allow it to boil, stirring all the while, for twenty minutes.

It may be eaten with salt, and milk, or sugar or treacle as may be preferred.

Hasty pudding.—Boil half a pint of milk, and after beating two dessertspoonfuls of flour (myda, sūjī) into a paste with cold milk, add this to the boiling milk and stir it constantly *in one direction* for about ten or fifteen minutes.

Sago.—Put half an ounce of Sago (Sāgū dāna) into a saucepan with three quarters of a pint of cold water, and boil gently for an hour and a quarter. When it boils skim it, and stir frequently. Sweeten to taste. If necessary a dessertspoonful of brandy may be added.

Water Arrowroot.—Mix two teaspoonfuls of arrowroot into a thin paste with sufficient cold water in a breakfast cup. Have the kettle quite boiling, and stirring all the time add the boiling water gradually till it forms with the arrowroot a stiff jelly. Add sugar to taste, and if required a dessertspoonful of brandy.

A very useful food in cases of diarrhœa.

Milk arrowroot.—Make in the same way as water arrowroot using boiling milk in place of boiling water, or stirring over the fire in a saucepan for two or three minutes. Sweeten to taste and add brandy if required.

Corn flour.—A dessertspoonful of Brown and Polson's corn flour mixed to a thin paste with a little milk is mixed with half a pint of boiling milk and stirred over the fire in a saucepan for four or five minutes. Sweeten to taste.

OTHER USEFUL FOODS.

Custard.—Custard pudding. Tapioca pudding. Ground rice.

Dall.—This last is an exceedingly good food for men in hard work, on fishing and shooting expeditions in places where perhaps meat is not available. It has one great advantage that practically any native servant, even though not a professed cook, can cook it so as to be thoroughly palatable, and with well boiled rice it forms as good a food, from the point of view of nourishment, as could be devised.

Sugar.—The value of sugar as a food when taking hard exercise is not sufficiently remembered. As a drink to be taken with you when fishing or shooting, tea without milk and well sweetened is better than anything else.

What to drink.—Never be tempted, however thirsty you may be, to drink either milk or water from an unknown source. Your most important care when providing for a day's shooting or fishing should be a due supply of drink, and tea, as before said, is by far the best in every way. Alcohol, in any form is bad when you have hard work to do, especially if it is to be in the heat. Sweetened tea* will quench your thirst better, and will give you real energy, whereas alcohol will increase your thirst after a little while, and only helps you to use up more quickly what energy you have left. Never take alcohol, if at all, till you have finished your day's work.

* The tabloid brand tea is portable and convenient, but I think most people will prefer to carry uncompressed tea.

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